



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/350,393	07/09/1999	RAY J. WU	19603/2760(C	7999

7590 02/10/2003

MICHAEL L GOLDMAN
NIXON PEABODY LLP
CLINTON SQUARE
P O BOX 1051
ROCHESTER, NY 14603

EXAMINER

COLLINS, CYNTHIA E

ART UNIT	PAPER NUMBER
----------	--------------

1638

DATE MAILED: 02/10/2003

18

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/350,393

Applicant(s)

WU ET AL.

Examiner

Cynthia Collins

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 26 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 1638

DETAILED ACTION

The Amendment filed November 26, 2002, paper no. 16, has been entered.

Claim 18 is cancelled.

Claims 1-17 are newly amended.

Claims 1-17 are pending.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

All previous objections and rejections not set forth below have been withdrawn.

Claim Rejections - 35 USC § 112

Claim 1, and claims 2-17 dependent thereon, remain rejected under 35 U.S.C. 112, second paragraph, as being indefinite in the recitation of minimal promoter, for the reasons of record set forth in the office action mailed May 22, 2002.

Applicant's arguments filed November 26, 2002, have been fully considered but they are not persuasive.

Applicant argues that the term "minimal promoter" is well known in the art, and would be understood to describe a sequence necessary and sufficient for promoter activity, but not containing at least some of the regulatory elements of the full promoter sequence (reply page 5).

The Office maintains that the prior art's use of the term "minimal promoter" does not sufficiently define the metes and bounds of claim 1 as a variety of different kinds of promoters are described as "minimal" in the prior art.

Art Unit: 1638

Claim 5 remains rejected under 35 U.S.C. 112, second paragraph, as being indefinite in the recitation of "shortened", for the reasons of record set forth in the office action mailed May 22, 2002.

Applicant's arguments filed November 26, 2002, have been fully considered but they are not persuasive.

Applicant argues that the term "shortened promoter" is well known in the art, and would be understood to describe a truncated promoter which still retains its function (reply page 5).

The Office maintains that the prior art's use of the term "shortened promoter" does not sufficiently define the metes and bounds of claim 1 as a variety of different kinds of promoters are described as "shortened" in the prior art.

Claim Rejections - 35 USC § 102

Claims 1-4, 7 and 9 remain rejected under 35 U.S.C. 102(b) as being anticipated by Wu et al. (Abstract 113, General Meeting of The International Program on Rice Biotechnology, September 15-17, 1997, Applicant's IDS), for the reasons of record set forth in the office action mailed May 22, 2002.

Applicant's arguments filed November 26, 2002, have been fully considered but they are not persuasive.

Applicant argues that Wu et al. do not teach or suggest an expression cassette comprising at least one ARBC unit, a minimal promoter, and a DNA molecule that increases tolerance to salt

Art Unit: 1638

and drought stress in plants as required by the claims, and that Wu et al. also do not provide disclosure of the ABRC unit itself (reply page 7).

The Office maintains that Wu et al. anticipate the claimed invention as Wu et al. teach an expression cassette comprising an ABA-inducible promoter and a DNA molecule (encoding HVA1, COR 47, MTL D or P5CS) that increases tolerance to salt and drought stress in plants. The Office further maintains that Wu et al. need not explicitly disclose the ABRC unit itself, as an ABA-inducible promoter would inherently comprise at least one ARBC unit.

Claim Rejections - 35 USC § 103

Claims 1-17 remain rejected under 35 U.S.C. 103(a) as being unpatentable over of Wu et al. (Abstract 113, General Meeting of The International Program on Rice Biotechnology, September 15-17, 1997, Applicant's IDS) in view of Applicant's admitted prior art, for the reasons of record set forth in the office action mailed May 22, 2002.

Applicant's arguments filed November 26, 2002, have been fully considered but they are not persuasive.

Applicant argues that claims 1-17 are not unpatentable over Wu et al. for the reasons set forth under 35 U.S.C. 102(b) above (reply page 8).

The Office maintains that claims 1-17 are unpatentable over Wu et al. for the reasons set forth under 35 U.S.C. 102(b) above, as well as the reasons set forth in the office action mailed May 22, 2002.

Art Unit: 1638

Claims 1-17 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Xu et al. (Plant Physiology, 1996, Vol. 110, pages 249-257) in view of Shen et al. (The Plant Cell, Vol. 8, pages 1107-1119, July 1996, Applicant's IDS), further in view of Applicant's admitted prior art, for the reasons of record set forth in the office action mailed May 22, 2002.

Applicant's arguments filed November 26, 2002, have been fully considered but they are not persuasive.

Applicant argues that claims 1-17 are not unpatentable over Xu et al. in view of Shen et al., as the PTO has failed to show that Shen et al. provide any reasonable expectation of success for a method for conferring tolerance to salt and drought stress in a monocot plant by transforming the plant with an expression cassette comprising at least one ARBC unit, a minimal promoter, and a DNA molecule that increases tolerance to salt and drought stress (reply pages 8-10).

The Office maintains that both the success of Xu et al. in conferring tolerance to salt stress and drought stress in a rice plant by using microparticle bombardment to transform a plant with a DNA molecule encoding the late embryogenesis abundant protein HVA1, and the success of Shen et al. in conferring ABA inducibility to a minimal promoter by operably linking the minimal promoter to the ABRC of the *Hva1* gene, provide a reasonable expectation of success for the purpose of conferring salt stress or drought stress tolerance to a monocotyledonous plant.

Claims 1-17 remain provisionally rejected under 35 U.S.C. 103(a) as being obvious over copending Application No. 09/107201 which has a common inventor with the instant application, for the reasons of record set forth in the office action mailed May 22, 2002.

Art Unit: 1638

The Office notes Applicant's request that this rejection be held in abeyance until one of the pending applications is issued (reply page 10).

Claims 1-17 remain provisionally rejected under 35 U.S.C. 103(a) as being obvious over copending Application No. 09/339364 which has a common inventor with the instant application, for the reasons of record set forth in the office action mailed May 22, 2002.

The Office notes Applicant's request that this rejection be held in abeyance until one of the pending applications is issued (reply page 10).

Double Patenting

Claims 1-17 remain rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 and 10 of U.S. Patent No. 5,981,842, for the reasons of record set forth in the office action mailed May 22, 2002.

Applicant's arguments filed November 26, 2002, have been fully considered but they are not persuasive.

Applicants argue that claims 1-7 and 10 of U.S. Patent No. 5,981,842 neither disclose nor suggest transforming monocotyledonous plants with an expression cassette comprising at least one abscisic acid response complex unit, a minimal promoter, and a DNA molecule that increases tolerance to salt and drought stress in plants. Applicants also request that, to the extent that the PTO is combining the disclosure of claims 1-7 and 10 of Wu with other art cited in the outstanding office action, that the identification of such a combination in order to properly respond (reply pages 10-11).

Art Unit: 1638

The Office maintains that the rejected claims are obvious over claims 1-7 and 10 of U.S. Patent No. 5,981,842, which disclose a method of producing a cereal (monocotyledonous) plant cell or protoplast useful for regeneration of a water or salt stress tolerant plant, and a method of increasing tolerance of a cereal plant to water or salt stress, by transformation of a cereal plant cell or plant with a nucleic acid encoding a group 3 late embryogenesis abundant protein, including HVA1. As stated in the previous office action, ABRC units, minimal promoters, and the use of *Agrobacterium* mediated transformation were known in the art at the time of Applicant's invention, and their use in the methods of the instant invention would have been an obvious optimization of design parameters.

Claims 1-17 remain provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 3-5, 11-12, 15, 46-55 and 72 of copending Application No. 09/107201, for the reasons of record set forth in the office action mailed May 22, 2002.

The Office notes Applicant's request that this rejection be held in abeyance until one of the pending applications is issued (reply page 11).

Claims 1-17 remain provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-30 of copending Application No. 09/339364, for the reasons of record set forth in the office action mailed May 22, 2002.

Art Unit: 1638

The Office notes Applicant's request that this rejection be held in abeyance until one of the pending applications is issued (reply page 11).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Remarks

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Collins whose telephone number is (703) 605-1210. The examiner can normally be reached on Monday-Friday 8:45 AM -5:15 PM.

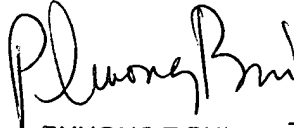
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on (703) 306-3218. The fax phone numbers for the

Art Unit: 1638

organization where this application or proceeding is assigned are (703) 308-4242 for regular communications and (703) 308-4242 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

CC
February 4, 2003


PHUONG T. BUI
PRIMARY EXAMINER 2/8/03